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## Effects of carbon source on production of $\beta$ -agarase from a marine bacterium, *Agarivorans* sp. JA-1

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Agar, a polysaccharide present in the walls of some red algae, can be degraded by several bacterial strains from marine environments and other sources. *Agarivorans* sp. JA-1 is one of the marine bacteria that secreted  $\beta$ -agarase which catalyze the hydrolysis of agar. These hydrolytic enzymes are classified in two groups according the made of action on the agarose  $\alpha$ -agarases cleave the  $\alpha$ -1,3 linkage of agarose, and  $\beta$ -agarases cleave the  $\beta$ -1,4 linkage of agarose. In this study, we describe the effects of carbon sources on production of an  $\beta$ -agarase from *Agarivorans* sp. JA-1. We investigated activity in differing carbon sources. The production of  $\beta$ -agarase was according to carbon sources was in the order of sucrose, glucose, galactose and fructose. In batch culture, production was optimal when strain was incubated at 30°C in a marine broth medium (Difco 2216, USA) with carbon source. The strain was cultivated 30°C, 250 rpm which was used for all assay.

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